

Application Serial No.: 10/531,442  
Response Dated: February 11, 2009  
In reply to the Final Office action of December 12, 2008

### **REMARKS**

In response to the Final Office action dated December 12, 2008, Applicants respectfully request reconsideration based on the following remarks. Applicants respectfully submit that the claims as presented here are in condition for allowance.

Claims 1-15 are pending in the present application. The Examiner has previously acknowledged Applicants' election of claims 1-4, and therefore, claims 5-12 have been previously withdrawn from consideration. Claims 1-4 and 13-15 remain pending for further consideration upon entry of the present response.

No claims have been amended, canceled or added. No new matter has been added. Applicants respectfully request reconsideration of claims 1-4 and 13-15 based on the above amendments and following remarks.

#### **Claim Rejections Under 35 U.S.C. §103**

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 1-4 and 13-15 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kim (U.S. Patent No. 6,624,871, hereinafter "Kim '871") in view of Morozumi (U.S. Patent No. 4,862,237, hereinafter "Morozumi"). The Examiner states that Kim '871 discloses all of the elements of the abovementioned claims, except for *an insulating substrate*, which the Examiner states is primarily disclosed in col. 6, ln 66-col. 7, ln 4 of Morozumi. Applicants respectfully traverse.

First, it is respectfully noted that the combination of these references was cited in the very first Office action on the merits mailed on February 08, 2007. Applicants have since overcome

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the combination of these references (with many intervening Office actions and corresponding amendments), and hence respectfully submit that the present rejection using the same references in this Final Office action appears improper.

Nevertheless, the Examiner states on pages 2-3 of the Detailed Action that Kim discloses with respect to FIG. 4A “an etching assistant pattern (39, fig. 4A) made of the same layer as the semiconductor layer (33, fig. 4A) and located out of an area enclosed (out of the area because the pad area is the section of the semiconductor layer that is at end of the data line outside the pixel area) by the gate liness and the data liness (col. 4, lns. 18-25; fig. 3).”

However, referring to FIG. 3 of Kim, it is seen that the etch stop layer 38 is disposed in an area defined by the intersection of the gate line 31L and data line 35L. More specifically, FIG. 3 of Kim discloses that the etch stop layer 39 covers the gate, source and drain electrodes 35G, 35S and 35D, respectively, located inside the area defined by intersection of the gate line 31L and data line 35L. Moreover, Kim discloses in FIGS. 3, and 4A relied upon by the Examiner, the etch stop layer 39 disposed over and following the path of the data line 35L and disposed over and intersecting the gate line 31L.

Therefore, it is respectfully submitted that neither Kim nor Morozumi, either alone or in combination, teach or suggest, an etching assistant pattern located out of an area defined by intersections of the gate line and the data line, as in claim 1. Thus, independent claim 1, including claims depending therefrom, i.e., claims 2-4 and 13-15, define over Kim in view of Morozumi.

Further, Kim discloses in FIG. 4A relied upon by the Examiner that the etch stop layer 39 is located inside a pixel area defined by intersections of the gate line 31L and the data line 35L, and does not teach or suggest the etching assistant pattern is located outside of a pixel area, as in claim 13. In addition, Kim discloses in FIG. 4A relied upon by the Examiner that the etch stop layer 39 is formed on a passivation layer 36, and does not teach or suggest the etching assistant pattern is formed directly on the gate insulating layer, as in claim 14.

The Examiner introduced Kim '871 in the prior Office action to allegedly teach a data wire comprising an upper film of Al or Al alloy as claimed in dependent claim 2. However, the alleged teaching of a data wire comprising an upper film of Al or Al alloy does not cure the defects of Kim '871 noted above with respect to independent claim 1. Specifically, neither Kim

‘871 nor Morozumi disclose, teach or suggest: or suggest: **wherein the etching assistant pattern is extended from the semiconductor layer and has a thickness different than a thickness of the semiconductor layer** as claimed in claim 15.

Lastly, Kim discloses in FIG. 4A relied upon by the Examiner that the etch stop layer 39 and the semiconductor layer 33 formed on two different layers, and does not teach or suggest an etching assistant pattern made of the same layer as the semiconductor pattern, as in claim 1.

Specifically, neither Kim ‘871 nor Morozumi disclose, teach or suggest: or suggest: an etching assistant pattern made of the same layer as the semiconductor layer and located out of an area enclosed by the gate lines and the data lines as claimed in amended independent claim 1.

Therefore, it is respectfully submitted that neither Kim ‘871 nor Morozumi, either alone or in combination, teach or suggest, an etching assistant pattern having a thickness different than a thickness of the semiconductor layer, as in claim 1. Thus, independent claim 1, including claims depending therefrom, i.e., claims 2-4 and 13-15, define over Kim ‘871 in view of Morozumi.

Accordingly, it is respectfully requested that the rejection to claims 1-4 and 13-15 under § 103(a) be withdrawn and allow claims 1-4 and 13-15 to issue.

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**Conclusion**

In view of the foregoing remarks distinguishing the prior art of record, Applicants submit that this application is in condition for allowance. Early notification to this effect is requested.

The Examiner is invited to contact Applicants' Attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application in order to address any questions or remaining issues concerning the same.

Applicants hereby petition for any necessary extension of time required under 37 C.F.R. 1.136(a) or 1.136(b) which may be required for entry and consideration of the present Reply. If there are any charges due in connection with this response, please charge them to Deposit Account 06-1130.

Respectfully submitted,

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